AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1-9 (Canceled)

10. (Withdrawn) Pharmaceutical composition intended for the treatment or prevention of a papillomavirus infection or tumor, which comprises, as therapeutic agent(s), one or more recombinant vectors into which there are inserted DNA fragments coding for:

(1) at least one polypeptide from the early region of a papillomavirus and at least one polypeptide from the late region of a papillomavirus,

(2) at least one polypeptide from the early region of a papillomavirus, at least one polypeptide from the late region of a papillomavirus and at least one polypeptide having an immunostimulatory activity, or

(3) at least one polypeptide from an early or late region of a papillomavirus and at least one poiypeptide having an immunostimulatory activity;

said DNA fragments being placed under the control of the elements necessary for their expression in a host cell or organism.

11. (Withdrawn) Pharmaceutical composition according to Claim 10, wherein said polypeptides are derived from E6 protein, from the E7 protein or from the E6 and E7 protein of a papillomavirus.

12. (Withdrawn) Pharmaceutical composition according to Claim 10, wherein the recombinant vector is a viral vector which can be derived from the genome of a virus selected from poxviruses, adenoviruses, retroviruses, herpesviruses and adeno-associated viruses.

13. (Withdrawn) Pharmaceutical composition according to Claim 12, wherein the recombinant vector is derived from a poxvirus selected from the group consisting of vaccinia virus, canarypox virus and fowlpox virus.

14. (Withdrawn) Pharmaceutical composition according to Claim 13, wherein the recombinant vector is derived from a vaccinia virus selected from the Copenhagen, Wyeth and modified Ankara (MVA) strains.

15. (Withdrawn) Pharmaceutical composition according to Claim 13, wherein the elements essential for the expression of the DNA fragments coding for said polypeptides comprise a promoter of a gene of a vaccinia virus selected from the promoters of the thymidine kinase (TK), 7.5K, H5R and K1L genes.

16. (Withdrawn) Pharmaceutical composition according to Claim 14, wherein the recombinant vector is derived from a vaccinia virus of the Copenhagen strain and in that the DNA fragments coding for said polypeptides are inserted into the TK locus and/or the K1L locus of said vaccinia virus.

17. (Withdrawn) Pharmaceutical composition according to Claim 14, wherein the recombinant vector is derived from a vaccinia virus of the MVA strain and in that the DNA fragments coding for said polypeptides are inserted at the level of any of the excision zones selected from the I, II, III, IV, V and VI excisions of said vaccinia virus.

18. (Withdrawn) Pharmaceutical composition according to Claim 10, intended for the treatment or prevention of a papillomavirus infection or tumor, characterized in that it comprises one or more recombinant vectors derived from the Copenhagen or MVA strain of a vaccinia virus into which there are inserted:

(1) a DNA fragment coding for the ES protein of a papillomavirus, a DNA fragment coding for the E7 protein of a papillomavirus and a DNA fragment coding for the molecule B7.1,

(2) a DNA fragment coding for the E6 protein of a papillomavirus, a DNA fragment coding for the E7 protein of a papillomavirus and a DNA fragment coding for interleukin-2,

(3) a DNA fragment coding for the ES protein of a papillomavirus, a DNA fragment coding for the E7 protein of a papillomavirus, a DNA fragment coding for the molecule B7.1 and a DNA fragment coding for interleukin-2,

(4) a DNA fragment coding for the ES protein of a papillomavirus, a DNA fragment coding for the E7 protein of a papillomavirus, a DNA fragment coding for the L1 protein of a papillomavirus and a DNA fragment coding for the L2 protein of a papillomavirus,

(5) a DNA fragment coding for the ES protein of a papillomavirus, a DNA fragment coding for the E7 protein of a papillomavirus, a DNA fragment coding for the L1 protein of a papillomavirus, a DNA fragment coding for the L2 protein of a papillomavirus and a DNA fragment coding for the molecule B7.1,

(6) a DNA fragment coding for the ES protein of a 5 papillomavirus, a DNA fragment coding for the E7 protein of a papillomavirus, a DNA fragment coding for the L1 protein of a papillomavirus, a DNA fragment coding for the L2 protein of a papillomavirus and a DNA fragment coding for interleukin-2, or

(7) a DNA fragment coding for the ES protein of a papillomavirus, a DNA fragment coding for the E7 protein of a papillomavirus, a DNA fragment coding for the L1 protein of a papillomavirus, a DNA fragment coding for the L2 protein of a papillomavirus, a DNA fragment coding for the molecule B7.1 and a DNA fragment coding for interleukin-2.

19. (Withdrawn) Pharmaceutical composition according to Claim 10, intended for the prevention of a papillomavirus infection or tumor, characterized in that it comprises one or more recombinant vectors derived from the Copenhagen or MVA strain of a vaccinia virus, into which there are inserted:

(1) a DNA fragment coding for the L1 protein of a 25 papillomavirus, a DNA fragment coding for the L2 protein of a papillomavirus and a DNA fragment coding for the molecule B7.I,

(2) a DNA fragment coding for the L1 protein of a papillomavirus, a DNA fragment coding for the L2 protein of a papillomavirus and a DNA fragment coding for interleukin-2, or a DNA fragment coding for the L1 protein of a papillomavirus, a DNA

fragment coding for the L2 protein of a papillomavirus, a DNA fragment coding for interleukin-2 and a DNA fragment coding for the molecule B7.I.

20. (Withdrawn) Pharmaceutical composition according to Claim 10, wherein the recombinant vector is alive or killed.

21-24. (Canceled)

25. (Withdrawn) Pharmaceutical composition according to Claim 10, wherein said early region polypeptide is a nononcogenic variant of the E6 and/or E7 protein of a papillomavirus.

26. (Withdrawn) Pharmaceutical composition according to Claim 10, wherein said late region polypeptide is derived from the L1 protein, the L2 protein or from the L1 and L2 proteins.

27. (Withdrawn) Pharmaceutical composition according to Claim 10, wherein said polypeptide having immunostimulatory activity is selected from the group consisting of interleukin-2, interleukin-7, interleukin-12 and the co-adhesion molecules B7.1 and B7.2.

28. (Withdrawn) Pharmaceutical composition according to Claim 27, wherein said polypeptide having immunostimulatory activity is derived from interleukin-2.

29. (Withdrawn) Pharmaceutical composition according to Claim 27, wherein said polypeptide having immunostimulatory activity is derived from the molecule B7.1.

30. (Withdrawn) Pharmaceutical composition according to Claim 10, comprising:

(1) a polypeptide from the E6 region, a polypeptide from the E7 region, a polypeptide from the L1 region and a polypeptide from the L2 region of a papillomavirus;

(2) a polypeptide from the E6 region, a polypeptide from the E7 region of a papillomavirus and a polypeptide derived from interleukin-2;

(3) a polypeptide from the E6 region, a polypeptide from the E7 region of a papillomavirus and a polypeptide derived from the molecule B7.1;

(4) a polypeptide from the E6 region, a polypeptide from the E7 region of a papillomavims, a polypeptide derived from the molecule B7.1 and a polypeptide derived from interleukin-2;

(5) a polypeptide from the E6 region, a polypeptide from the E7 region, a polypeptide from the L1 region, a polypeptide from the L2 region of a papillomavirus and a polypeptide derived from interleukin-2;

(6) a polypeptide from the E6 region, a polypeptide from the E7 region, a polypeptide from the L1 region, a polypeptide from the L2 region of a papillomavirus and a polypeptide derived from the molecule B7.i; or

(7) a polypeptide from the E6 region, a polypeptide from the E7 region, a polypeptide from the L1 region, a polypeptide from the L2 region of a papillomavirus, a polypeptide derived from the molecule B7.1 and a polypeptide derived from interleukin-2.

31. (Withdrawn) Pharmaceutical composition according to Claim 10, wherein the papillomavirus is selected from the group consisting of HPV-16, HPV-18, HPV-3 1, HPV-33 and HPV-45.

32-78. (Canceled)

79-85. (Canceled)

86. (Withdrawn) The pharmaceutical composition according to claim 79, wherein said polypeptides of a papillomavirus are expressed from independent expression control elements.

87-88. (Canceled)

89. (Currently Amended) A method for the treatment or prevention of dysplasia or cancer of the neck of the uterus caused by a papillomavirus, comprising administering to a patient in need of such treatment an effective amount of a pharmaceutical composition consisting of

(a) a combination of early and late papillomavirus polypeptides consisting of a nononcogenic variant of the native E6 polypeptide ~~polypeptide from the E6 region~~ of a papillomavirus, a nononcogenic variant of the native E7 polypeptide ~~polypeptide from the E7 region~~ of a papillomavirus, a native ~~polypeptide from the~~ L1 polypeptide ~~region~~ of a papillomavirus and a native ~~polypeptide from the~~ L2 polypeptide ~~region~~ of a papillomavirus, ~~wherein said polypeptides of a papillomavirus are expressed from independent expression control elements~~; and

(b) a pharmaceutically acceptable carrier for administration of said composition by injection into humans or into animals.

90-100. (Canceled)

101-104. (Canceled)

105. (Currently Amended) A method for the treatment or prevention of dysplasia or cancer of the neck of the uterus caused by a papillomavirus, comprising administering to a patient in need of such treatment an effective amount of a pharmaceutical composition consisting of

(a) a combination of early and late papillomavirus polypeptides consisting of a nononcogenic variant of the native ~~polypeptide from the~~ E6 polypeptide ~~region~~ of a papillomavirus, a nononcogenic variant of the native ~~polypeptide from the~~ E7 polypeptide ~~region~~ of a papillomavirus, a native ~~polypeptide from the~~ L1 polypeptide ~~region~~ of a papillomavirus and a native ~~polypeptide from the~~ L2 polypeptide ~~region~~ of a papillomavirus;

(b) at least one polypeptide having an immunostimulatory activity selected from the group consisting of interleukin-2 and interleukin-7; and

(c) a pharmaceutically acceptable carrier for administration of said composition by injection into humans or into animals~~,~~

~~wherein said early and late papillomavirus polypeptides and said polypeptide having an immunostimulatory activity are expressed from independent expression control elements~~.

106. (Canceled)

107. (Currently Amended) A method for the treatment or prevention of dysplasia or cancer of the neck of the uterus caused by a papillomavirus, comprising administering to a patient in need of such treatment an effective amount of a pharmaceutical composition consisting of:

(a) a nononcogenic variant of a native ~~an~~ E6 protein of a human papillomavirus, wherein said nononcogenic variant is a variant of the native E6 protein having amino acids 111-115 deleted as compared to the native E6 protein;

(b) a nononcogenic variant of a native ~~an~~ E7 protein of a human papillomavirus, wherein said nononcogenic variant is a variant of the native E7 protein having amino acids 21-26 deleted as compared to the native E7 protein;

(c) a native ~~polypeptide from the~~ L1 polypeptide ~~region~~ of a human papillomavirus;

(d) a native ~~polypeptide from the~~ L2 polypeptide ~~region~~ of a human papillomavirus;

(e) interleukin-2; and

(f) a pharmaceutically acceptable carrier for administration of said composition by injection into humans or into animals~~,~~

~~wherein said early and late papillomavirus polypeptides and said polypeptide having an immunostimulatory activity are expressed from independent expression control elements~~.

108-116. (Canceled)

117. (Currently Amended) A method for the treatment of dysplasia or cancer of the neck of the uterus caused by a papillomavirus, comprising administering to a patient in need of such treatment an effective amount of a pharmaceutical composition consisting of

(a) a combination of polypeptides from the early region of a papillomavirus consisting of nononcogenic variants of the native E6 and the E7 polypeptides;

(b) at least one polypeptide having an immunostimulatory activity selected from the group consisting of interleukin-2 and interleukin-7; and

(c) a pharmaceutically acceptable carrier for administration of said composition by injection into humans or into animals~~,~~

~~wherein said combination of polypeptides from the early region of a papillomavirus consists of the E6 and the E7 polypeptides and wherein said polypeptide having an immunostimulatory activity is selected from the group consisting of interleukin-2 and interleukin-7 and wherein said polypeptide from the early region of a papillomavirus and said polypeptide having an immunostimulatory activity are expressed recombinantly from independent expression control elements~~.

118. (Currently Amended) A method for the treatment of dysplasia or cancer of the neck of the uterus caused by a papillomavirus, comprising administering to a patient in need of such treatment an effective amount of a pharmaceutical composition consisting of:

(a) a nononcogenic variant of the native ~~an~~ E6 region of a human papillomavirus, wherein said nononcogenic variant is a variant of the native E6 protein having amino acids 111-115 deleted as compared to the native E6 protein;

(b) a nononcogenic variant of the native ~~an~~ E7 region of a human papillomavirus, wherein said nononcogenic variant is a variant of the native E7 protein having amino acids 21-26 deleted as compared to the native E7 protein;

(c) interleukin 2; and

(d) a pharmaceutically acceptable carrier for administration of said composition by injection into humans or into animals~~,~~

~~wherein said polypeptide from the early region of a papillomavirus and said said polypeptide having an immunostimulatory activity are expressed recombinantly from independent expression control elements~~.

119-123. (Canceled)

124. (Currently Amended) The method according to claim 89, wherein said ~~the polypeptide from the early E6 region is a~~ nononcogenic variant of the ~~native~~ E6 polypeptide ~~protein~~ of a papillomavirus has ~~having~~ amino acids 111-115 deleted as compared to said native E6 protein.

125. (Previously Presented) The method according to claim 124, wherein said papillomavirus is HPV-16.

126. (Currently Amended) The method according to claim 89, wherein said ~~the polypeptide from the early E7 region is a~~ nononcogenic variant of the native E7 polypeptide~~protein~~ of a papillomavirus has ~~having~~ amino acids 21-26 deleted as compared to said native E7 protein.

127. (Previously Presented) The method according to claim 126, wherein said papillomavirus is HPV-16.

128. (Previously Presented) The method according to claim 89, wherein said papillomavirus is selected from the group consisting of HPV-16, HPV-18, HPV-31, HPV-33 and HPV-45 types.

129. (Currently Amended) The method according to claim 105, wherein said ~~the polypeptide from the early E6 region is a~~ nononcogenic variant of the native E6 protein of a papillomavirus has ~~having~~ amino acids 111-115 deleted as compared to the native E6 protein.

130. (Previously Presented) The method according to claim 129, wherein said papillomavirus is HPV-16.

131. (Currently Amended) The method according to claim 105, wherein said ~~the polypeptide from the early E7 region is a~~ nononcogenic variant of the native E7 protein of a papillomavirus has ~~having~~ amino acids 21-26 deleted as compared to said native E7 protein.

132. (Previously Presented) The method according to claim 131, wherein said papillomavirus is HPV-16.

133. (Previously Presented) The method according to claim 105, wherein the polypeptide having an immunostimulatory activity is interleukin-2.

134. (Previously Presented) The method according to claim 105, wherein said papillomavirus is selected from the group consisting of HPV-1 6, HPV-1 8, HPV-31, HPV-33 and HPV-45 types.

135. (Previously Presented) The method according to claim 107, wherein said papillomavirus is HPV-16.

136. (Currently Amended) The method according to claim 117, wherein said ~~the polypeptide from the early region of a papillomavirus is a~~ nononcogenic variant of the native E6 protein of a papillomavirus has ~~having~~ amino acids 111-115 deleted as compared to said native E6 protein and/or said ~~a~~ nononcogenic variant of the native E7 protein of a papillomavirus has ~~having~~ amino acids 21-26 deleted as compared to said native E7 protein.

137. (Previously Presented) The method according to claim 117, wherein the polypeptide having an immunostimulatory activity is interleukin-2.

138. (Previously Presented) The method according to claim 117, wherein said papillomavirus is selected from the group consisting of HPV-16, HPV-18, HPV-31, HPV-33 and HPV-45 types.

139. (Previously Presented) The method according to claim 118, wherein said papillomavirus is HPV-16.